STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Ameren Transmission Company of Illinois	:	
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Petition for a Certificate of Public Convenience and Necessity, pursuant to Section 8-406.1 of the Illinois Public Utilities Act, and an Order pursuant to Section 8-503 of the Public Utilities Act, to Construct, Operate and Maintain a New High Voltage Electric Service Line and Related Facilities in the Counties of Adams, Brown, Cass, Champaign, Christian, Clark, Coles, Edgar, Fulton, Macon, Montgomery, Morgan, Moultrie, Pike, Sangamon, Schuyler, Scott, and Shelby, Illinois.	:	No. 12-0598

INITIAL BRIEF OF MOULTRIE COUNTY PROPERTY OWNERS

Eric Robertson
Ryan Robertson
Andrew Rankin
Lueders, Robertson & Konzen LLC
P. O. Box 735
Granite City, IL 62040
618-876-8500
erobertson@lrklaw.com
ryrobertson@lrklaw.com
drankin@lrklaw.com

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INITIAL BRIEF OF MOULTRIE COUNTY PROPERTY OWNERS

The Moultrie County Property Owners[1] ("MCPO"), pursuant to Section 200.800 (83 Ill. Adm. Code Part 200.800) of the Rules of Practice of the Illinois Commerce Commission ("ICC" or "Commission") and the briefing schedule set by the Administrative Law Judges ("ALJs") in this proceeding, present this Initial Brief for the Commission's consideration.

I.

INTRODUCTION

Ameren Transmission Company of Illinois ("ATXI") has petitioned this Commission for a Certificate of Public Convenience and Necessity, pursuant to Section 8-406.1 of the Illinois Public Utilities Act ("Act") and an Order pursuant to Section 8-503 of the Act to construct, operate and maintain approximately 375 miles of 345 kV electric transmission line and new and expanded substations beginning at the Mississippi River near Quincy, Illinois and ending at the Indiana border near Sugar Creek, Indiana, referred to as the Illinois River Project ("IRP"). The project includes a separate element from Sidney, Illinois to Rising, Illinois. (*See*, ATXI Initiating Petition, ¶¶ 8-9; Dauphinais, MCPO Ex. 1.0 at 4:65-67).

MCPO Witnesses and Testimony

MCPO consists of owners of real property in Moultrie County, Illinois, affected by the Primary and/or Alternate Routes initially proposed by ATXI for the Mt. Zion to Kansas segment of

[1] MCPO consists of approximately 45 property owners, lessees, etc., in Mountrie County affected by the location of the ATXI transmission line. (*See*, MCPO November 27, 2012 and March 29, 2013 Petitions for Leave to Intervene).

its project. MCPO presented direct and rebuttal testimony in this proceeding. It presented the direct and rebuttal testimony of James R. Dauphinais of the firm of Brubaker & Associates, Inc., and Mr. Rudolph K. Reinecke of the firm Integrated Environmental Solutions.[2] MCPO also presented the rebuttal testimonies of Mr. Robert G. Fischer and Mr. Greg Sanders.[3]

Mr. Dauphinais is a Managing Principal of Brubaker & Associates, Inc. He holds a Bachelor of Science degree in electrical engineering and has completed graduate level courses in power system engineering. Prior to his employment with Brubaker & Associates, Inc., he was employed as Senior Engineer in the Transmission Resource Planning Department of Northeast Utilities Service Company. There he was involved in the examination of potential solutions to transmission operation and planning problems, including, but not limited to, transmission line solutions and the routes that might be utilized by such transmission line solutions. He was also responsible for performing numerous power flow analyses. He represented Northeast Utilities in the technical working groups for the New England Power Pool and the Northeast Power Coordinating Council. (Dauphinais, MCPO Ex. 1.0 at 1-2:9-22 and App. A at 1-3). Mr. Dauphinais has testified before the Federal Energy Regulatory Commission, numerous State Commissions and the utility commissions of

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[2] Direct testimony of James R. Dauphinais - MCPO Ex. 1.0 (Public and Confidential version) and MCPO Exs. 1.1 through and including 1.32 (Public) and Exs. 1.28, 1.29, 1.30, 1.31, and 1.32 (Confidential). Direct Testimony of Rudolph K. Reinecke - MCPO Ex. 2.0 and MCPO Exs. 2.1 (Corrected), 2.2 (Corrected), 2.3, 2.4, 2.5, 2.6, and 2.7. Rebuttal Testimony of Mr. Dauphinais - MCPO Ex. 3.0. Rebuttal Testimony of Mr. Reinecke - MCPO Ex. 4.0.

[3] Rebuttal Testimony of Robert G. Fischer, MCPO Ex. 5.0, 5.1 and 5.2. Rebuttal Testimony of Greg Sanders, MCPO 6.0. Both Mr. Fischer and Mr. Sanders' rebuttal testimonies were admitted into evidence by Affidavit, MCPO Exs. 5.3 and 6.1.

Canadian Provinces, addressing a variety of issues, including, but not limited to, transmission planning and routing. (Dauphinais, MCPO Ex. 1.0, App. A at 2-5).

Mr. Dauphinais presented testimony relating to the portion of the IRP extending from Pana to Kansas, including the Pana to Mt. Zion and Mt. Zion to Kansas routing segments as well as the proposed Mt. Zion Substation. (*See*, Dauphinais, MCPO Ex. 1.0 generally). Specifically, he worked with Mr. Rudolph K. Reinecke of Integrated Environmental Solutions, to expand the geographical diversity of the transmission line route options available to the Commission for the Pana to Kansas portions of the IRP by proposing two new alternate route segments. *(Id.* at 5:87-97). The two alternative route segments proposed by Mr. Reinecke and Mr. Dauphinais were located in geographically separate locations from the ATXI alternatives and provide a diversity of routing factor results. (Reinecke, MCPO Exs. 2.3 and 2.4). The first of these segments runs from Mt. Zion to Kansas ("Route Segment MCPO MZK") and is located to the North of ATXI's originally proposed Primary and Alternate Route segments from Mt. Zion to Kansas. The second is a new alternative route segment from Pana directly to Kansas (Route Segment MCPO PK"). The western portion of this route is South of ATXI's originally proposed Primary and Alternate Routes from Mt. Zion to Kansas. (*Id.*, MCPO Ex. 1.0 at 10-18:177-380).

Mr. Dauphinais performed a routing factor analysis, using factors identified by ATXI to determine which of all of the filed route segment combinations for the Pana to Kansas portions of the IRP best minimized the adverse impacts to the public. He also made specific routing recommendations to the Commission. (Dauphinais, MCPO Ex. 1.0 at 18-41:382-907). Additionally, he addressed the need for the Mt. Zion Substation and recommended certain alternative

solutions to address reliability issues in the Decatur, Illinois area the new Mt. Zion Substation was intended to address. (Dauphinais, MCPO Ex. 1.0 at 44-68:973-1511).

MCPO witness Reinecke is the Vice-President and Project Manager for Integrated Environmental Solutions. He has 16 years experience in environmental projects and surveys, including the development and study of transmission line routing analysis. (Reinecke, MCPO Ex. 2.7 at 1 and 3). He has previously testified with regard to such analyses in several cases before the Texas Public Utility Commission. (Reinecke, MCPO Ex. 2.0, App. A at 1-2 and MCPO Ex. 2.7 at 1, 3). He also has extensive experience in natural resource planning projects, waters of the United States permitting projects and pipeline routing surveys. (Reinecke, MCPO Ex. 2.7 at 1-2). Mr. Reinecke testified that he was retained by MCPO to help develop some additional alternative routes between the Pana, Mt. Zion and Kansas Substations in the IRP. He describes the methodology used to site the MCPO alternative routes and discusses the analysis of environmental and other potential impacts associated with the MCPO routes. He presented maps of the MCPO routes, route comparison summaries for all MCPO routes and all ATXI Primary and Alternate Routes between Pana and Kansas. (Reinecke, MCPO Ex. 2.0 generally, MCPO Exs. 2.1, 2.2, 2.3, 2.4, 2.5, and 2.6).

MCPO also presented the rebuttal testimony of Mr. Robert Fischer. Mr. Fischer is an airline transport pilot, with over 2,500 hours experience flying light unpressurized aircraft. In addition, he is a certified flight instructor and a former airline instructor pilot. (Fischer, MCPO Ex. 5.0 at 1-2 and Ex. 5.1). He testified that transmission towers for ATXI's proposed 345 kV transmission line in this case, if constructed on MCPO's proposed Alternate Route from Mt. Zion to Kansas, would not pose

any danger to pilots who comply with mandatory Federal aviation regulations. Nor would these towers pose a problem for operation of the Tuscola airport. (Fischer, MCPO Ex. 5.0 generally).

Lastly, MCPO presented the rebuttal testimony of Mr. Greg R. Sanders in response to the testimony of certain landowners in Piatt and Shelby Counties. (Sanders, MCPO Ex. 6.0). Mr. Sanders concluded that there are Amish farmsteads and cultural facilities in Moultrie County that are potentially impacted by ATXI's Primary and Alternate Route line segments and that landowners in Moultrie County had concerns about the ATXI Primary and Alternate Routes from Mt. Zion to Kansas that were similar to those expressed by the land-owning witnesses from Piatt and Shelby County. (*Id.*).

MCPO-ATXI Stipulation

Subsequent to the filing of the direct and rebuttal testimony in this proceeding, and prior to the initiation of cross-examination, MCPO and ATXI entered into a Stipulation (Borkowski Ex. 10.2, Pt. 2 (Rev) Stip. Ex. 7) recommending the approval of the ATXI Primary Route from Pana to Mt. Zion and the Route Segment MCPO MZK from Mt. Zion to Kansas (collectively the "Stipulated Route" or "Route MCPO-P-MZK") as most appropriate combination of routes for the Pana to Kansas portion of the IRP and agree that ATXI's proposed location of the Mt. Zion Substation is appropriate. While MCPO continues to believe that the MCPO direct route from Pana to Kansas (Route (MCPO-PK), which uses Route Segment MCPO PK alone) is a viable route, assuming there was no Mt. Zion Substation, MCPO recommends the Stipulated Route as the best and most viable route combination for the Pana to Kansas via Mt. Zion portion of the IRP given the stipulated inclusion and location of the Mt. Zion Substation.

MCPO Route Development

Mr. Reinecke's methodology for developing the two MCPO alternative routes first considered the locations associated with the opportunities between the two substations that were being connected. Next MCPO iteratively developed corridors utilizing routing opportunities while avoiding sensitivities. (Reinecke, MCPO Ex. 2.0 3:45-50). During this iterative process, Mr. Reinecke continued to refine the alternative routes to lower the impacts to sensitivities. (Reinecke, MCPO Ex. 2.0 3:46). Once two routes were identified that had the overall least impact to sensitivities, these Alternative Routes were filed with names and addresses of a 2-mile corridor. Subsequently, routing factor data for the Alternative Routes were tabulated and an aerial survey of the routes was conducted. (Reinecke, MCPO Ex. 2.0 3:52-54) Further route refinements were made to adjust paralleling opportunities, reduce impacts to residential and non-residential structures, and decrease woodland and stream impacts (Reinecke, MCPO Ex. 2.0 9:190-194), which were considered High sensitivities by Murphy in the public involvement process (Murphy, ATXI Ex. 4.3 Part 1 7-8). Finally, all routing factors used by ATXI were tabulated for MCPO Routes from data provided by ATXI, Illinois Department of Natural Resources, and Illinois State Archeological Survey. (Reinecke MCPO Ex. 2.0 3:57-58 and MCPO Ex. 2.3).

II.

REQUIREMENTS FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

The requirements for a Certificate of Public Convenience and Necessity ("Certificate") as requested by ATXI in this proceeding, are set forth in Section 8-406.1 of the Public Utilities Act. (220 ILCS 5/8-406.1). Section 8-406.1 requires the Commission to grant a Certificate if

> . . . it finds the Project will promote the public convenience and necessity and that all of the following criteria are satisfied:
>
> 1. That the project is necessary to provide adequate, reliable and efficient service to the public utility's customers and is the least-cost means of satisfying the service needs of the . . . customers, or that the Project will promote the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives.
>
> 2. That the public utility is capable of efficiently managing and supervising the construction process and has taken sufficient action to ensure adequate and efficient construction and supervision of the construction.
>
> 3. That the public utility is capable of financing the proposed construction without significant adverse financial consequences for the utility or its customers. (220 ILCS 5/8-406.1(f), (1), (2), and (3)). (emphasis supplied).

In sum, Section 8-406.1 requires first, based on the evidentiary record, the Commission must find the IRP will promote the public convenience and necessity. In addition to the first criteria, the Commission must also find the project is necessary to provide adequate, reliable and sufficient

service and is the least-cost means of doing so; or that the project will promote the development of a competitive electricity market that operates efficiently, is equitable to customers and is the least cost means of satisfying those objectives. Second, the Commission must find that ATXI is capable of managing and supervising the construction process and ensure adequate and efficient construction and construction supervision. Third, the Commission must find that ATXI is capable of financing the project without adverse consequences to its customers or itself.

MCPO has considered the first criteria (public convenience and necessity) and the second criteria (necessary to provide adequate, reliable and efficient service and is the least-cost means of doing so). It has proposed alternative routes in this case that meet these criteria.

III.

OVERALL NEED FOR THE PROPOSED FACILITIES

MCPO did not address the overall need for the IRP in its testimony in this proceeding. It made no objection to ATXI's demonstration of the overall need for the IRP. As noted below, it did present testimony on the need for the Mt. Zion Substation. However, as noted above, it has entered into a Stipulation with ATXI accepting ATXI's proposed inclusion of the Mt. Zion Substation as part of the IRP and recommending the adoption of ATXI's Primary Route from Pana to Mt. Zion in combination with MCPO's Route Segment MZK from Mt. Zion to Kansas as the appropriate route segment combination for the IRP Pana to Kansas portion of the IRP.

IV.

LEAST-COST AND THE PROPOSED TRANSMISSION LINE ROUTE

F. Pana-Kansas

MCPO Position

MCPO addresses only the Pana to Kansas portion of the IRP. It specifically recommended an alternative route from Pana to Mt. Zion to Kansas, Route MCPO-P-MZK,, and an alternative route directly from Pana to Kansas, route MCPO-PK. MCPO proposed its alternative routes segments in compliance with the ALJs' December 14, 2012 Order that required interveners to identify their alternative routes by December 31, 2012. (Dauphinais, MCPO Ex. 1.0 at 14:233-242). MCPO further refined and adjusted its alternative route segments in its Direct Testimony. (Dauphinais, MCPO Ex. 1.0 at 16-17:326-348; *See*, Reinecke, MCPO Ex. 2.0 at 8-9:183-202). Pursuant to Stipulation with ATXI, MCPO now supports the Stipulated Route (incorporating ATXI's Primary Route from Pana to Mt. Zion and Route Segment MCPO MZK, which together form Route MCPO-P-MZK).

The Pana to Kansas portion of the IRP via Mt. Zion as proposed by ATXI includes approximately 102 to 107 miles of new single phase 345 kV transmission line, consisting of a line from Pana to Mt. Zion and a line from Mt. Zion to Kansas. It also includes a new 345 kV/138 kV transformer to be installed in a new Mt. Zion Substation. (Dauphinais, MCPO Ex. 1.0 at 4-5:75-85).

MCPO witness Dauphinais recognized that the proposed Mt. Zion Substation would certainly resolve the reliability issues, identified by ATXI, in the Decatur, Illinois area. (Dauphinais, MCPO Ex. 1.0 at 69:1513-1526). However, he questioned whether those reliability issues might be better

addressed through certain other 345 kV/138 kV reinforcements in the Decatur area. (*Id.*). He collectively referred to those other reinforcements as the "Oreana 345/138 kV Reinforcement". (*Id.*). It was suggested that if the Commission determined there were other reasonable means of addressing reliability issues in the Decatur area, the new Mt. Zion Substation would not be needed to do so and the IRP could be routed directly from Pana to Kansas. (*Id.*). Under that circumstance, the Commission could have appropriately selected MCPO's route MCPO-PK for the IRP, the direct route from Pana to Kansas. (*Id.*).

Mr. Dauphinais also recommended that if the Commission determined the Mt. Zion 345/138 kV substation was needed, the Commission should select a combination of ATXI's Primary Route from Pana to Mt. Zion and Route Segment MCPO MZK from Mt. Zion to Kansas, collectively Route MCPO-P-MZK. (Dauphinais, MCPO Ex. 1.0 at 42-43:925-955).

In its rebuttal testimony, ATXI identified certain concerns that ATXI had with the implementation of MCPO's proposed Oreana's 345/138 kV Reinforcement in place of the new Mt. Zion Substation and the possible resulting cost to Ameren Illinois Company customers. (Kramer, ATXI Ex. 11.0 (Rev.) at 16-19:337-403). In recognition of these concerns, and to resolve same, MCPO and ATXI entered into the Stipulation referenced in Section I above. (Borkowski, ATXI Ex. 10.2 (Rev.) Pt. 2, Stip. Ex. 7). In the Stipulation, MCPO and ATXI agreed on the location of the Mt. Zion Substation as proposed by ATXI and a recommended route, the Stipulated Route, which is MCPO's Route MCPO-P-MZK. The Stipulated Route uses ATXI's Primary Route segment from Pana to Mt. Zion and MCPO's Route Segment MZK.

The Stipulated Route is the lowest baseline cost route segment combination for the Pana to Kansas portion of the IRP assuming the inclusion of the Mt. Zion Substation at the location recommended by ATXI. ATXI witness Jeffrey A. Murbarger states that the portion of the Stipulated Route from Pana to Mt. Zion (ATXI's Primary Route) has a baseline estimated cost of $62,869,000 and the portion of the Stipulated Route from Mt. Zion to Kansas (MCPO's Route Segment MZK) has a baseline estimated cost of $126,511,000. (Murbarger, ATXI Ex. 16.3 Rev. At 6-7; Dauphinais, MCPO Ex. 1.5). ATXI's Primary Route segment from Pana to Mt. Zion has the lowest baseline estimated cost of all of the available route segment options between Pana and Mt. Zion. Similarly, Route Segment MZK has the lowest baseline estimated cost of all of the available route segment options between Mt. Zion and Kansas. (*See*, Murbarger, ATXI Ex. 16.3 (Rev.) at 6-7).

In addition, the Stipulated Route is comparable in length to all other combination options available from Pana to Kansas via Mt. Zion, falling within the range of the shortest route combination (101.8 miles) and the longest route combination (106.9 miles) with a length of 104.6 miles. (Reinecke, MCPO Ex. 2.4). As noted above, even though the Stipulated Route falls into the mid-range of available route segment combinations with respect to length, it is less costly. (*See*, Murbarger, ATXI Ex. 16.3 (Rev.) at 6-7). This is because the Mt. Zion to Kansas portion of the Stipulated Route (Route Segment MCPO MZK) has fewer turning structures than ATXI's Alternate Route from Mt. Zion to Kansas. (Dauphinais, Tr. 573-575).

Furthermore, the Stipulated Route has fewer residential structures within 500 feet than any of the ATXI Primary or Alternate Route combinations between Pana and Kansas. (*See*, Reinecke, MCPO Ex. 2.5). Specifically it has 31 fewer residences within 500 feet, (64 versus 33), than ATXI's

Recommended Rebuttal Route (the combination of ATXI's Primary Route from Pana to Mt. Zion and ATXI's Alternate Route from Mt. Zion to Kansas). (*See*, Dauphinais, Ex. 1.5 comparing Route ATXI-P-A to Route MCPO-P-MZK; Reinecke, Ex. 2.4 at 4 of 4; *see* Murphy, ATXI Ex. 13.0 (2nd Rev.) at 53:1132-1142 - identifying ATXI's Recommended Rebuttal Route). In addition, route MCPO-P-MZK (the Stipulated Route) has significantly fewer residences within the 150 foot range (2 within150 ft) than either the combination of ATXI's Primary Route segments from Pana to Mt. Zion to Kansas (13 within 150 ft) or the combination of ATXI's Alternate Route segments Pana to Mt. Zion to Kansas (19 within 150 ft). (*See*, Dauphinais, MCPO Ex. 1.5, comparing Route MCPO-P-MZK to Routes ATXI-P-P and ATXI-A-A).

It is clear that the Stipulated Route is the less costly route and impacts significantly fewer residences than the other routing alternatives available for the Pana to Mt. Zion to Kansas portion of the IRP, assuming the inclusion of the Mt. Zion Substation. Therefore, the Stipulated Route should be adopted.

1. Need for Mt. Zion Substation

MCPO witness Dauphinais presented testimony on the need for the Mt. Zion Substation as part of the IRP. First, based on power flow analyses he concluded that ATXI did not need the proposed Mt. Zion Substation to resolve local reliability issues in the Decatur, Illinois area. Second, he testified that the Substation was not the only 345/138 kV Reinforcement that could, in conjunction with the remainder of the IRP, sufficiently resolve the subject reliability issues and maintain the other estimated IRP benefits. Mr. Dauphinais testified resolution of those issues could be accomplished by routing the Pana to Kansas portion of the IRP directly from Pana to Kansas and

utilizing a 345/138 kV reinforcement consisting of a third 345/138 kV transformer at Oreana and a third 138 kV transmission line from Oreana to ADM North. (*See*, Dauphinais, MCPO Ex. 1.0 at 69:1515-1526). As noted earlier, Mr. Dauphinais referred to the aforementioned 345/138 kV reinforcements near Oreana as the "Oreana 345/138 kV Reinforcement". Mr. Dauphinais did not dispute the need to address reliability issues identified by ATXI in the Decatur area or that the IRP, with the Mt. Zion Substation, could also address the subject reliability concerns. (Dauphinais, MCPO Ex. 1.0 at 50-52:1106-1147).

In rebuttal ATXI witnesses argued that MCPO's alternative approach to solving the reliability issues in the Decatur area could impose higher costs on Ameren Illinois customers; could prevent full reliability benefits to the Decatur, Illinois area; and could prevent delivery of the full benefits of the IRP as a whole. (Kramer, ATXI Ex. 11.0 (Rev.) at 14-19:293-420).

MCPO presented cross-examination exhibits that may have shown ATXI's concerns were unfounded. (*See*, MCPO Cross Exs. 1, 2, and 3, presented in lieu of cross-examination of ATXI witness Kramer, (Tr. 624-625)). However, those exhibits also demonstrate the complexity associated with trying to resolve this issue through litigation.

Under these circumstances, MCPO believed that a Stipulation with ATXI regarding the need for the Mt. Zion Substation and the recommended use of ATXI's Primary Route from Pana to Mt. Zion and MCPO's Route Segment MCPO MZK from Mt. Zion to Kansas (the Stipulated Route or Route MCPO-P-MZK) was the best solution.

2. Location of Mt. Zion Substation

MCPO did not provide testimony with regard to the specific location of the Mt. Zion Substation except as related to the overall need for the Substation. MCPO has stipulated with ATXI to the location of the Mt. Zion Substation. (Borkowski, ATXI Ex. 10.2 (Rev.) Pt. 2 Stip. Ex. 7).

3. Route Location

As noted above in this Brief, MCPO has stipulated to a recommended route incorporating ATXI's Primary Route from Pana to Mt. Zion and Route Segment MCPO MZK from Mt. Zion to Kansas, the Stipulated Route or Route MCPO-P-MZK. MCPO fully supports and recommends adoption of that route, but notes that the outline submitted by the ALJs has requested certain information relating to the Pana to Kansas Route assuming the Mt. Zion Substation is not needed. MCPO provides that information in Subsection a. below, but since it has stipulated with ATXI on the need for the Mt. Zion Substation, supports and recommends the route that is the subject of the Stipulation between MCPO and ATXI. The Stipulated Route consists of ATXI's Primary Route from Pana to Mt. Zion and MCPO's Route Segment MCPO MZK from Mt. Zion to Kansas. These two route segments are discussed in Subsection b. and c. below.

a. Pana-Kansas (if Mt. Zion Substation Deemed Unnecessary)

i. Length of the Line

This information is available for route MCPO-PK in comparison to each of the other eight route combinations for the Pana to Kansas portion of the IRP in MCPO Exhibit 1.4 at 2 of 2. Route MCPO-PK is estimated to be 76.4 miles in length which would be less than the length of the other route combinations.

ii. Difficulty and Cost of Construction

The baseline cost estimate information for the individual route segments that would make up to nine route combinations available can be found in ATXI Exhibit 16.3 (Rev.) at 6 and 7. Route MCPO-PK, which only uses Route Segment MCPO PK, would have a lower baseline estimated cost ($139,585,000) than the other eight route combinations (all eight of which combine a route segment from Pana to Mt. Zion with a route segment either from Mt. Zion to Kansas or from Pana to Kansas).

iii. Difficulty and Cost of Operation and Maintenance

MCPO is not aware of any evidence that specifically addresses the cost of operation and maintenance of the Route MCPO-PK.

iv. Environmental Impacts

For Route MCPO-PK, in comparison to each of the other eight route combinations for the Pana to Kansas portion of the IRP, this information is found in MCPO Exhibit 2.4 at 3 of 4. Route MCPO-PK is comparable in environmental impacts to the other route combinations with the exception of wooded areas and flood plains.

v. Impacts on Historical Resources

For Route MCPO-PK, in comparison to each of the other eight route combinations for the Pana to Kansas portion of the IRP, this information is found in MCPO Exhibit 2.4 at 2 of 4. Route MCPO PK does not affect any historical resources, but there are two archeological sites within the 500 foot study corridor for the route. Neither of the two sites within the 500 foot study corridor for the route is actually crossed by MCPO's Route MCPO-PK. Neither site should be directly or

indirectly impacted by the proposed construction of Route MCPO-PK. (*See*, Reinecke, MCPO Ex. 2.0 at 18-19:420-432).

vi. Social and Land Use Impacts

For route MCPO-PK, in comparison to each of the other eight route combinations for the Pana to Kansas portion of the IRP, this information is found in MCPO Exhibit 2.4 at 1 of 4 and 2 of 4. Route MCPO-PK does not affect any Schools or Churches. Only one cemetery is located within its 500 foot study corridor. Concern was expressed about route MCPO-PK and its proximity to certain city water fields. However, it was explained the water wells would be at least 500 feet away from the line and would not be intereferred with. (*See*, Reinecke, MCPO Ex. 4.0 at 2:14-27).

vii. Number of Affected Landowners and other Stakeholders and Proximity to Homes and Other Structures

For the route MCPO-PK, in comparison to each of the other eight route combinations for the Pana to Kansas portion of the IRP, this information is found in MCPO Exhibit 2.4 at 4 of 4. Route MCPO-PK impacts fewer residences in total than any of the other eight route combinations.

viii. Proximity to Existing and Planned Development

MCPO is not aware of any evidence presented on a tabulation of this factor. Direct testimony was presented with regard to a possible new feedlot in proximity to proposed Route MCPO-PK. However, the new feedlot would be approximately 3,500 feet away from the centerline of the route and not in close proximity to Route MCPO-PK. (Reinecke, MCPO Ex. 4.0 at 4:62-67).

ix. Community Acceptance

For Route MCPO-PK, in comparison to each of the other eight route combinations for the Pana to Kansas portion of the IRP, this information can be obtained from MCPO Exhibit 1.0 at 25-35:542-776 in terms of the high sensitivity factors ATXI identified from its public meeting.

x. Visual Impact

MCPO is not aware of any explicit tabulation of the information.

xi. Presence of Existing Corridors

For Route MCPO-PK in comparison to each of the other route combinations for the Pana to Kansas portion of the IRP this information is provided in MCPO Exhibit 1.7. Route MCPO-PK is relatively superior in its performance in this area as it relates to paralleling existing transmission lines and roads, etc., but relatively average in its performance when paralleling of sections lines is included.

b. Pana-Mt. Zion

As noted in Section III, F above, MCPO took the position that if the Commission determined that the Mt. Zion Substation was needed in the context of the IRP, then the Commission should favorably consider MCPO Route MCPO-P-MZK (now the Stipulated Route), which uses ATXI's Primary Route segment from Pana to Mt. Zion and Route Segment MCPO MZK from Mt. Zion to Kansas. (Dauphinais, MCPO Ex. 1.0 at 71-72:1541-1559). Use of ATXI's Primary Route was slightly favored over the use of ATXI's Alternate Route from Pana to Mt. Zion (*Id.*) as part of the route segment combinations from Pana to Kansas. Both Route MCPO-P-MZK and Route MCPO-A-MZK had significantly less adverse impact to the public than ATXI's four filed route segment

combinations between Pana and Kansas (via Mt. Zion) as measured by ATXI-identified Phase I and Phase II high sensitivity routing factors. However, MCPO witnesses picked Route MCPO-P-MZK over Route MCPO-A-MZK because of the additional cost of Route MCPO-A-MZK and the fact that Route MCPO-P-MZK had significantly greater paralleling of significant existing linear features than Route MCPO-A-MZK. (*Id.*).

In her direct testimony, ATXI witness Murphy indicated that the Primary Routes for each portion of the proposed transmission project were preferred since they had the lowest potential for impact. (Murphy, ATXI Ex. 4.3, (Pt. 2 of 5), at 3 of 10). According to ATXI witnesses, the Primary Routes generally had the lowest cumulative occurrence associated with sensitivities, though in some cases reduction in the number of homes impacted or acres of tree removal required superseded the lowest cumulative occurrence (where there was not a significant variation in quantities of occurrences over other sensitivities). (*Id.*). ATXI witnesses testified though that some portions of the Primary Route are longer than some portions of ATXI's Alternate Routes, the increases in length allowed for a trade-off of other potential impacts that would require additional costs. (*Id.*). Specifically, with regard to the Pana to Mt. Zion portion of the IRP, ATXI witness Murphy concluded that the Primary Route between Pana and Mt. Zion was preferred because it required less tree removal, was four miles shorter, and lower cost than the Alternate Route. (Murphy, ATXI Ex. 4.3 (Pt. 2 of 5), at 5 of 10). In rebuttal ATXI recommended its Primary Route segment from Pana to Mt. Zion because it represented the route that was lowest cost, best reduced the potential for environmental impact, and best reflected input from ATXI's public process. (Murphy, ATXI Ex. 13.0C (2nd Rev.) at 50:1079-1085).

For the reasons identified above, MCPO recommends the Commission select ATXI's Primary Route segment between Pana and Mt. Zion as part of the Stipulated Route and approve ATXI's proposed location of the new Mt. Zion Substation.

i. Length of the Line

ATXI's Primary Route from Pana to Mt. Zion is 3.2 miles shorter in length than ATXI's Alternate Route from Pana to Mt. Zion. (ATXI Ex. 4.5 at 3 of 4). All else held equal, the length of a route affects its cost and adverse impact. However, caution must be used when using length of a route as a factor as often all else is not equal.

ii. Difficulty and Cost of Construction

To the best of MCPO's knowledge, ATXI's witnesses have not identified any difficulties with constructing either ATXI's Primary Route from Pana to Mt. Zion or ATXI's Alternate Route from Pana to Mt. Zion.

In his rebuttal testimony, ATXI witness Mr. Murbarger presented baseline cost estimate for ATXI's Primary Route from Pana to Mt. Zion that is approximately $9.3 million (14.8%) less than that for ATXI's Alternate Route from Pana to Mt. Zion. (ATXI Ex. 16.3 (Rev.) at 6 of 9).

iii. Difficulty and Cost of Operation and Maintenance

To the best of MCPO's knowledge, none of ATXI witness identified any differences between the ATXI Primary Route from Pana to Mt. Zion and the ATXI Alternate Route from Pana to Mt. Zion with regard to the difficulty and cost of operation and maintenance.

iv. Environmental Impacts

ATXI witness Ms. Murphy presented the routing factors related to the environmental impact of ATXI's filed route alternatives in ATXI Exhibit 4.5 at 3 of 4. There was no major difference in these environmental impact routing factors for ATXI's Primary Route from Pana to Mt. Zion versus ATXI's Alternate Route from Pana to Mt. Zion except regard to the acres of flood plain within this 500 foot study corridor. However, the crossing of flood plains has not been identified as a significant environmental concern. (ATXI Ex. 4.5 at 3 of 4 and Reinecke, MCPO Ex. 4.0 at 2-3:28-48).

v. Impacts on Historical Resources

ATXI has presented routing factors related to historical resources for ATXI's filed routes. Neither ATXI's Primary Route or ATXI's Alternate Route from Pana to Mt. Zion impact any National Register Historical Places, Known Historic Structures or Archeological Historic sites. There are two known archeological sites within the 500 foot corridor for ATXI's Alternate Route, but none within the 500 foot corridor for ATXI's Primary Route. (ATXI Ex. 4.5 at 2 of 4).

vi. Social and Land Use Impacts

ATXI witness Ms. Murphy presented routing factors related to social and land use impacts for ATXI's filed route alternatives in MCPO Exhibit 4.5 at 1 of 4 and 2 of 4. Of the social and land use factors, ATXI identified the public as favoring the following as some of the high sensitivity factors in Phase I of ATXI's public meetings:

- Cemeteries
- Churches

- Prime Farmland
- Schools

(Murphy, ATXI Ex. 4.0 at 17:359-363).

ATXI's Primary Route and Alternate Route from Pana to Mt. Zion has the same number of cemeteries and churches within their 500 foot study corridors. ATXI's Primary Route has one less school, but 34.7 more acres of Prime Farmland, within its 500 foot study corridor than ATXI's Alternate Route. ATXI's Primary Route has 106.2 fewer acres of Cultivated Crop and Pasture / Hay within the 500 foot study corridor than ATXI's Alternate Route. (ATXI Ex. 4.5 at 1 of 4 and 2 of 4).

vii. Number of Affected Landowners and other Stakeholders and Proximity to Homes and Other Structures

ATXI witness Ms. Murphy did not tabulate the number of affected landowners and stakeholders for ATXI's filed route alternatives. In ATXI Exhibit 4.5 at 4 of 4, she did provide routing factor information with respect to the proximity to homes and structures. ATXI's Primary Route from Pana to Mt. Zion has one less residence within 150 feet of the transmission line than ATXI's Alternate Route from Pana to Mt. Zion. (ATXI Ex. 4.5 at 4 of 4). ATXI's Primary Route from Pana to Mt. Zion has 11 more residences within 500 feet of the transmission line than ATXI's Alternate Route from Pana to Mt. Zion. (ATXI Ex. 4.5 at 4 of 4). Furthermore, as discussed earlier, ATXI's Alternate Route from Pana to Mt. Zion achieves a better 500 foot residence location performance at an additional cost of $9.3 million (14.8%) and through inferior use of significant existing linear features.

viii. Proximity to Existing and Planned Development

To the best of MCPO's knowledge no party presented specific evidence addressing this specific factor on this route segment.

ix. Community Acceptance

As discussed previously in Section IV.F.3.b. above, ATXI identified in its public meeting process those routing factors the public favored as high sensitivities. Also, as discussed in that same Section, MCPO witness Dauphinais indicated in his direct testimony that Route MCPO-P-MZK has better performance with regard to the Phase I high sensitivities, but Route MCPO-A-MZK has better performance with regard to the Phase II high sensitivities. (MCPO Exs. 1.5 and 1.6). As a result, high sensitivity routing factors were not the criterion that differentiated the two routes. Instead, the tie breaker for Mr. Dauphinais between the routes was that ATXI's Primary Route from Pana to Mt. Zion has a $9.3 million (14.8%) lower cost than ATXI's Alternate Route from Pana to Mt. Zion and ATXI's Primary Route also made better use of existing linear feature opportunities. (Dauphinais, MCPO Ex. 1.0 at 43:940-955).

x. Visual Impact

ATXI witness Ms. Murphy did not tabulate any explicit routing factors related to visual impact. MCPO witness Mr. Dauphinais in his direct testimony discussed the use of the existing linear features to avoid introducing new visual impact where none already exists. (Dauphinais, MCPO Ex. 1.0 at 37:805-811). As discussed below, ATXI's Primary Route from Pana to Mt. Zion makes better use of significant existing linear feature opportunities than ATXI's Alternate Route from Pana to Mt. Zion.

xi. Presence of Existing Corridors

MCPO witness Dauphinais in his direct testimony discussed the importance of considering the paralleling of existing linear features in terms of the length of the route not paralleling such features. By example, he showed that this is important because the routes being compared can potentially have significantly different lengths causing a significantly longer route to potentially appear to have less impact than a shorter route simply because the longer route also has more total miles of paralleling. (Dauphinais, MCPO Ex. 1.0 at 36:778-37:801). He also discussed at length that when evaluating such linear feature paralleling, it is important to work from the most significant type of existing linear feature to the least significant type of existing linear feature. He specifically explained that not all existing linear features are the same with regard to their degree of visual impact, noise impact, environmental fragmentation and/or agricultural fragmentation. (Dauphinais, MCPO Ex. 1.0 at 37:802 - 37:834).

Mr. Dauphinais summarized his analysis of opportunities for route paralleling in MCPO Exhibit 1.7. While Mr. Dauphinais did not separately tabulate paralleling factors for ATXI Primary and Alternate Routes between Pana and Mt. Zion, a comparison between Routes MCPO-P-MZK and MCPO-A-MZK (or alternatively Routes ATXI-P-P and ATXI-A-P) in MCPO Exhibit 1.7 reveals the relative performance in paralleling by ATXI's Primary Route from Pana to Mt. Zion versus ATXI's Alternate Route from Pana to Mt. Zion. As can be seen from MCPO Exhibit 1.7, when ATXI's Primary Route from Pana to Mt. Zion is used in place of ATXI's Alternate Route from Pana to Mt. Zion, the number of miles <u>not</u> parallel to existing linear features is significantly reduced. Specifically:

- The length not paralleling existing transmission lines is reduced by 24.5 miles;
- The length not paralleling existing transmission lines, major roads or railroads is reduced by 23.0 miles;
- The length not paralleling existing transmission lines, major roads or other utility right-of-way is reduced by 14.7 miles; and
- The length not paralleling existing transmission lines, major roads, railroads, minor roads, other utility right-of-way or section lines is reduced by 12.2 miles.

(MCPO Ex. 1.7, comparing Route MCPO-P-MZK to Route MCPO-A-MZK).

c. Mt. Zion to Kansas

As noted in Section III, F above, MCPO witnesses recommended the use of either ATXI's Primary Route or Alternate Route from Pana to Mt. Zion in combination with MCPO's Route Segment MZK if the Commission concluded the new Mt. Zion Substation is needed.[4] (Dauphinais, MCPO Ex. 1.0 at 9:156-174 and 32:925-971). MCPO witnesses studied and examined various combinations of route segments from Pana to Mt. Zion to Kansas, assuming the need for the new Mt. Zion Substation. Based on that analysis, and as noted in Section III, G, 1 above, ATXI's Primary or Alternate Routes from Pana to Mt. Zion, in combination with Route Segment MCPO MZK from Mt. Zion to Kansas has the least adverse impact of the eight route alternatives considered by MCPO that include the Mt. Zion Substation (including ATXI's four filed route combinations between Pana and Kansas) with respect to ATXI's Phase I and Phase II high sensitivity routing factors and estimated cost. (Dauphinais, MCPO Ex. 1.0 at 25-35:542-776 and 42:928-931; Murbarger, Ex. 16.3

[4] As previously indicated, these Route combination were respectively identified as Route MCPO-P-MZK and Route MCPO-A-MZK. Route MCPO-P-MZK is now the Stipulated Route.

(Rev) at 6-7). The Stipulated Route, Route MCPO-P-MZK has the same electrical configuration for this portion of the IRP as ATXI's four filed route segment combinations. (Dauphinais, MCPO Ex. 1.0 at 23:488-496). Route MCPO-P-MZK is comparable to any of the other route combinations that include the Mt. Zion Substation with regard to minimizing the length of the route that fails to parallel existing transmission lines, major roads, railroads, minor roads, or utility rights-of-way. (Dauphinais, MCPO Ex. 1.0 at 40:869-883).

While use of ATXI's Primary Route from Pana to Mt. Zion, in conjunction with either its Primary Route or Alternate Route from Mt. Zion to Kansas, makes greater use of section line paralleling than Route MCPO-P-MZK, they each do so at a significant increase in adverse residential impacts. (Dauphinais, MCPO Ex. 1.0 at 40:883-889). Ultimately, MCPO witness Dauphinais recommended Route MCPO-P-MZK (now the Stipulated Route) over Route MCPO-A-MZK from Pana to Mt. Zion to Kansas because of its lesser cost and significantly greater use of linear feature paralleling opportunities. (*See*, Dauphinais, MCPO Ex. 1.0 at 43:951-955). Finally, review of all of the routing factors considered by ATXI, as part of the MCPO routing analysis, failed to disclose any circumstances that would justify a change in his routing analysis and conclusions. (Dauphinais, MCPO Ex. 1.0 at 44:956-971).

ATXI witness Murphy suggested that ATXI's Primary Route for each portion of the IRP (including the Primary Route from Mt. Zion to Kansas) was the preferred route because it had the lowest potential for impacts. (Murphy, ATXI Ex. 4.3 (Pt. 2 of 5) at 3 of 10). With regard to the Mt. Zion to Kansas portion of the IRP, Ms. Murphy also testified that while the Primary Route was almost two miles longer than the ATXI Alternate Route, because it involved marginally less tree

removal and had two fewer homes located within 150 feet, the Primary Route had a lower cost than the Alternate Route. (Murphy, ATXI Ex. 4.3 (Pt. 2 of 5) at 5 of 10). In rebuttal, Ms. Murphy switched her recommendation for the Mt. Zion to Kansas portion of the IRP from ATXI's Primary Route to ATXI's Alternate Route. (Murphy, ATXI Ex. 13.0 Corr. (2nd Rev.) at 53:1140-1142). Ms. Murphy recommended the use of ATXI Alternate Route, as her Recommended Rebuttal Route, in conjunction with ATXI's Primary Route from Pana to Mt. Zion. (*See*, Murphy, ATXI Ex. 13.0C (2nd Rev.) at 50:1079-1085).

Subsequently, ATXI and MCPO stipulated to the ATXI Primary Route from Pana to Mt. Zion and Route Segment MCPO MZK from Mt. Zion to Kansas (collectively, Route MCPO-P-MZK) as the recommended route from Pana to Kansas for the IRP. (Borkowski, ATXI Ex. 10.2, Pt. 2, Stip. Ex. 7). The record shows that Route MCPO-P-MZK is less costly, and impacts significantly fewer residences both within 150 feet and within 500 feet of the transmission line than any combination of ATXI routes between Pana and Kansas via Mt. Zion. (Dauphinais, MCPO Ex. 1.0 at 40-41:869-907; MCPO Ex. 1.5; Murbarger, ATXI Ex. 16.3 (Rev.) at 6-7).

Furthermore, Ameren witness Mr. Hackman, Project Sponsor for the IRP and second in command for the project, has testified the Route Segment MCPO MZK from Mt. Zion to Kansas is constructable. (Hackman, ATXI Ex. 3.1; Tr. 1020-1022). Mr. Hackman leads the Department responsible for the construction, maintenance and operation of Ameren Illinois Company and ATXI transmission systems. Mr. Hackman is familiar with Route Segment MCPO MZK and testified that ATXI had concluded that the reduced societal and environmental impacts associated with Route

Segment MCPO MZK justified the paralleling of existing transmission lines. (Hackman, Tr. 1022-1023).

Ms. Murphy ultimately recognized in cross-examination that in the end, ATXI made the decision on the appropriate routing for the IRP and her role was advisory. (Murphy, Tr. 934-935). Clearly, ATXI has determined that Route Segment MCPO MZK is appropriately a part of the Stipulated Route for Pana to Kansas via Mt. Zion. (Borkowski, ATXI Ex. 10.2 (Rev.) Stip. Ex. 7).

i. Length of the Line

MCPO's Route from Mt. Zion to Kansas, Route Segment MCPO MZK is 0.9 miles (1.3%) longer in length than ATXI's Primary Route from Mt. Zion to Kansas and 2.8 miles (4.2%) longer in length than ATXI's Alternate Route from Mt. Zion to Kansas. (ATXI Ex. 4.5 at 3 of 4 and MCPO Ex. 2.3 at 3 of 4).

As noted earlier, all else held equal, the length of a route affects its cost and adverse impact. However, caution must be used when using length of a route as a factor as often all else is not equal. This in particular is the case from Mt. Zion to Kansas as discussed below.

ii. Difficulty and Cost of Construction

To the best of MCPO's knowledge, ATXI's witnesses have not identified any difficulties with constructing MCPO's Route from Mt. Zion to Kansas (Route Segment MCPO MZK). Furthermore, on cross examination, ATXI witness Hackman indicated MCPO's Mt. Zion to Kansas Route is constructible. He also indicated ATXI has concluded the reduced societal and environmental impacts associated with MCPO's Mt. Zion to Kansas Route justified its paralleling of existing transmission lines. (Tr. at 1021-2023).

In his rebuttal testimony, ATXI witness Mr. Murbarger presented his baseline cost estimate for MCPO's Route from Mt. Zion to Kansas as approximately $2.6 million (2.0%) less than ATXI's Primary Route from Mt. Zion to Kansas and approximately $1.1 million (0.9%) less than ATXI's Alternate Route from Mt. Zion to Kansas. (ATXI Ex. 16.3 (Rev.) at 7 of 9).

iii. Difficulty and Cost of Operation and Maintenance

To the best of MCPO's knowledge, none of ATXI witness identified any differences between the MCPO Route from Mt. Zion to Kansas, the ATXI Primary Route from Mt. Zion to Kansas, and the ATXI Alternate Route from Mt. Zion to Kansas with regard to the difficulty and cost of operation and maintenance.

iv. Environmental Impacts

ATXI witness Ms. Murphy presented the routing factors related to the environmental impact of ATXI's filed Mt. Zion to Kansas route alternatives in ATXI Exhibit 4.5 at 3 of 4. MCPO witness Mr. Reinecke presented the routing factors related to the environmental impact of MCPO's Mt. Zion to Kansas Route in MCPO Ex. 2.3 at 3 of 4. MCPO's Mt. Zion to Kansas Route has 20.5 more acres of wooded areas in the 500 foot study corridor area than ATXI's Primary Route, but 8.2 fewer acres of wooded areas in the 500 foot study corridor than ATXI's Alternate Route. (MCPO Ex. 2.3 at 3 of 4 and ATXI Ex. 4.5 at 3 of 4).

v. Impacts on Historical Resources

ATXI has presented routing factors related to historical resources for ATXI's filed routes. MCPO for its route from Mt. Zion to Kansas did the same. Neither MCPO's Mt. Zion to Kansas Route, ATXI's Primary Route, or ATXI's Alternate Route impact any National Register Historical

Places, Known Historic Structures or Archeological Historic sites. There are four known archeological sites within the 500 foot study corridor for MCPO's Route from Mt. Zion to Kansas, one known archeological site within 500 foot study corridor for ATXI's Mt. Zion to Kansas Alternate Route and no archeological sites within the 500 foot corridor for ATXI's Mt. Zion to Kansas Primary Route. (MCPO Ex. 2.3 at 2 of 4 and ATXI Ex. 4.5 at 2 of 4). MCPO witness Mr. Reinecke indicates in his direct testimony that only one of the four sites within the 500 foot study corridor of MCPO's Mt. Zion to Kansas Route is actually crossed by MCPO's Mt. Zion to Kansas Route. (Reinecke, MCPO Ex. 2.0 at 8:426-432). Furthermore, Mr. Reinecke ultimately concluded the presence of this site will not prevent MCPO's Mt. Zion to Kansas Route from being constructed. (Reinecke, MCPO Ex. 2.0 at 20:457-463; Reinecke, MCPO Ex. 4 .0 at 4-6:68-124).

vi. Social and Land Use Impacts

ATXI witness Ms. Murphy presented routing factors related to social and land use impacts for ATXI's filed route alternatives in ATXI Exhibit 4.5 at 1 of 4 and 2 of 4. MCPO witness Mr. Reinecke did the same for MCPO's Mt. Zion to Kansas Route. (MCPO Ex. 2.3 at 1 of 4 and 2 of 4). Of the social and land use factors, ATXI identified the public as favoring the following as some of the high sensitivity factors in Phase I of ATXI's public meetings:

- Cemeteries
- Churches
- Prime Farmland
- Schools

(ATXI Ex. 4.0 at 17:359-363).

MCPO's Mt. Zion to Kansas Route, ATXI's Mt. Zion to Kansas Primary Route and ATXI's Mt. Zion to Kansas Alternate Route have the same number of churches and schools within their 500 foot study corridors. MCPO's Mt. Zion to Kansas Route and ATXI's Alternate Mt. Zion to Kansas Route both have one less cemetery within the 500 foot study corridors than ATXI's Primary Mt. Zion to Kansas Route. MCPO's Mt. Zion to Kansas Route has 132.3 fewer acres of Prime Farmland, within its 500 foot study corridor, than ATXI's Primary Route and 109.7 fewer acres of Prime Farmland than ATXI's Alternate Route. (MCPO Ex. 2.3 at 1 of 4 and 2 of 4 and ATXI Ex. 4.5 at 1 of 4 and 2 of 4).

It is worth noting that ATXI witness Murphy did not disagree that MCPO's Mt. Zion to Kansas Route (in combination of ATXI's Primary Route from Pana to Mt. Zion), is less costly, similar in length and impacts significantly fewer residences. (*See generally,* Murphy Ex. 13.0C (2nd Rev.) at 53-56:1132-1216). She raises procedural concerns about the development of MCPO's routing recommendations and the manner in which the routes were developed (*See*, Murphy ATXI Ex. 13.0C (2nd Rev.) at 53:1145-1150) and only one substantive criticism of the route, specifically that MCPO's Route from Mt. Zion to Kansas might interfere with aviation activities at the Tuscola Airport.

This latter criticism is based on the testimony of Piatt, Douglas and Moultrie County Property Owners (PDMO) witness Hruspa. (*Id.*). Ms. Murphy offered no independent analysis of her own on this subject. MCPO, on the other hand, responded to Mr. Hrupsa' testimony.

The primary complaint made by PDMO witness Mr. Dave Hrupsa is that MCPO's alternate route from Mt. Zion to Kansas for ATXI's proposed 345 kV transmission line would interfere with

airport operations at Tuscola Airport[1], making an approach or landing "almost impossible." (Hrupsa, Piatt-Douglas Affidavit at 2, see also Fischer, MCPO Ex. 5.0 at 2:18-23). As explained by MCPO witness Mr. Robert Fischer, these statements are incorrect, and his assertions unfounded.

First, Mr. Hrupsa claims that the traffic pattern must remain south of the airport because of the presence of towers to the north. While this may be true of landings on Runway 27, the opposite would be true for landings on Runway 9, where the crosswind, downwind, and base segments of an approach would necessarily be to the north of the airport. (Fischer, MCPO Ex. 5.0 at 3:47-53, see also Federal Aviation Regulation ("FAR") 91.126(b)(1)[2]).

Further, a review of the Airport Facilities Directory ("AFD") an FAA publication that is published and updated every 56 days, reveals that Traffic Pattern Altitude ("TPA") for this airport is 1465 feet above Mean Seal Level ("MSL") or 800' Above Ground Level ("AGL"). (Fischer, MCPO Ex. 5.0 at 3-4:53-57, See also AFD March 7, 2013-May 2, 2013 edition at page 76[3]). The proposed transmission lines have a maximum height of about 140', and would be located about 1/4 of a mile from the airport, running parallel to the runway. (Fischer, MCPO Ex. 5.0 at 2:25-34; *see* Reinecke, MCPO Ex. 2.0 at 22:504 - showing the transmission line would actually be 2,070 feet from the airport). Therefore, an aircraft would have to descend below 200 feet above ground about 1/4 of a mile from the airport in order to be impacted by the proposed transmission line, and as explained by Mr. Fischer "any operations by an airplane one-fourth (1/4) mile South of the Tuscola

[1] Tuscola Airport, International Civil Aviation Organization designator K96
[2] http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgFAR.nsf/0/bc3edee9f4eaa28c86256eeb00519374!OpenDocument
[3] http://aeronav.faa.gov/pdfs/ec_76_07MAR2013.pdf

Airport at or below 200 feet above ground level ("AGL") would be reckless and unsafe regardless of the presence of the proposed transmission line." (Fischer, MCPO Ex. 5.0 at 2:28-31).

Further, such operations are not permitted. (Fischer, MCPO Ex. 5.0 at 5:78-94). As long as the aircraft using the airport comply with the rules and standards governing flight operations in and around an airport, the location of ATXI's proposed Transmission line on MCPO's proposed Route Segment MCPO MZK will not be a problem. (*Id.* at 2:31-34). Pilots must complete rigorous training requirements and familiarize themselves with both the aircraft they fly, and all of the Federal Aviation Regulations ("FARs") related to operating an aircraft. (*Id.* at 3:37-44).

Another concern of Mr. Hrupsa's is that night-time operations would be particularly impacted. (Hrupsa Affidavit at 2). However, as explained by Mr. Fischer, the visibility requirement for night time operations is 3 miles. (Fischer, MCPO Ex. 5.0 at 4:59-72). Since the minimum visibility at night is three times that of daytime operations, visibility at night will not be an issue. (*Id.*). Further, Ameren may be required to put lights on the proposed transmission line's towers located near the airport, making them even more readily identifiable. (*Id.* at 4-5:72-78).

Additionally, as described in MCPO Ex. 2.2 by witness Mr. Rudolph Reinecke, the hazard requirements established by the Illinois Department of Transportation in Title 92, Chapter I, Subchapter b, Part 16, Section 16 of the Illinois Administrative Code do not apply to this airport. (Reinecke, MCPO Ex. 2.0 at 23:506-528, MCPO Ex. 2.2). Even if they did, the MCPO Route Segment MZK would comply with those requirements. (Reinecke, MCPO Ex. 2.0 at 24:529-533).

Finally, ATXI stated in testimony that it will work with Federal Agencies such as the FAA, and comply with all aviation related regulatory requirements (See Murphy, ATXI Exhibit 4.0 at 42-

43:848-876, 45). ATXI witness Hackman also indicated upon cross examination that MCPO's proposed alternate route from Mt. Zion to Kansas was "constructable". (Hackman, Tr. 1020-1022).

ATXI's proposed 345 kV transmission line in this proceeding, if constructed on the MCPO's proposed alternative route from Mt. Zion to Kansas (Route Segment MCPO MZK), would not pose any danger to pilots who comply with the mandatory Federal Aviation Regulations. Additionally, the placement of these transmission towers would not pose a problem with airport operations.

vii. Number of Affected Landowners and other Stakeholders and Proximity to Homes and Other Structures

ATXI witness Ms. Murphy did not tabulate the number of affected landowners and stakeholders for ATXI's filed route alternatives. In ATXI Exhibit 4.5 at 4 of 4, she did provide routing factor information with respect to the proximity to homes and structures. MCPO witness Mr. Reinecke did the same for MCPO's Mt. Zion to Kansas Route (Route Segment MCPO MZK) in MCPO Exhibit 2.3 at 4 of 4. Within 75 to 150 feet, MCPO's Mt. Zion to Kansas Route has 11 fewer residences than ATXI's Primary Route and 16 fewer residences than ATXI's Alternate Route. Within 150 to 300 feet, MCPO's Mt. Zion to Kansas Route has one more residence than ATXI's Primary Route and eight fewer residences than ATXI's Alternate Route. Within 300 to 500 feet, MCPO's Mt. Zion to Kansas Route has five fewer residences than ATXI's Primary Route and seven fewer residences than ATXI's Alternate Route. (MCPO Ex. 2.3 at 4 of 4 and ATXI Ex. 4.5 at 4 of 4). In total, within 500 feet, MCPO's Mt. Zion to Kansas Route has 15 (53.6%) fewer residences than ATXI's Primary Route and 31 (70.4%) fewer residences than ATXI's Alternate Route.

viii. Proximity to Existing and Planned Development

To the best of MCPO's knowledge no party presented specific evidence addressing this specific factor on this route segment.

ix. Community Acceptance

As discussed previously in Section IV.F.3.b., ATXI identified in its public meeting process those routing factors the public favored as high sensitivities. Also, MCPO witness Dauphinais also indicated in his direct testimony that Route MCPO-P-MZK has better performance with regard to the Phase I and Phase II high sensitivities than any of ATXI's filed route combinations from Pana to Kansas via Mt. Zion that utilize either ATXI's Primary or Alternate Route from Mt. Zion to Kansas. (Dauphinais, MCPO Ex. 1.0 at 28-31:604-674, MCPO Ex. 1.0 at 34-35:735-776, and MCPO Exs. 1.5 and 1.6).

x. Visual Impact

ATXI witness Ms. Murphy did not tabulate any explicit routing factors related to visual impact. MCPO witness Mr. Dauphinais in his direct testimony discussed the use of the existing linear features to avoid introducing new visual impact where none already exists. (Dauphinais, MCPO Ex. 1.0 at 37:805-811). As discussed below, MCPO's Mt. Zion to Kansas Route makes usage of significant existing linear feature opportunities in a manner that is comparable to ATXI's Primary and Alternate Routes from Mt. Zion to Kansas.

xi. Presence of Existing Corridors

As discussed earlier, MCPO witness Dauphinais in his direct testimony discussed the importance of considering the paralleling of existing linear features in terms of the length of the route

not paralleling such features. By example, he showed that this is important because the routes being compared can potentially have significantly different lengths causing a significantly longer route to potentially appear to have less impact than a shorter route simply because the longer route also has more total miles of paralleling. (Dauphinais, MCPO Ex. 1.0 at 36-37:778-801). He also discussed at length that when evaluating such linear feature paralleling, it is important to work from the most significant type of existing linear feature to the least significant type of existing linear feature. He specifically explained that not all existing linear features are the same with regard to their degree of visual impact, noise impact, environmental fragmentation and/or agricultural fragmentation. (Dauphinais, MCPO Ex. 1.0 at 37-38:802-834).

Mr. Dauphinais summarized his analysis of opportunities for route paralleling in MCPO Exhibit 1.7. While Mr. Dauphinais did not separately tabulate paralleling factors for the route options between Mt. Zion to Kansas, a comparison between Routes MCPO-P-MZK, ATXI-P-P and MCPO-P-A in MCPO Exhibit 1.7 reveals the relative performance in paralleling by MCPO's Mt. Zion to Kansas Route (Route Segment MCPO MZK) versus ATXI's Primary Route from Mt. Zion to Kansas and ATXI's Alternate Route from Mt. Zion to Kansas. As can be seen from MCPO Exhibit 1.7, Routes MCPO-P-MZK, ATXI-P-P and ATXI-P-A generally have similar characteristics when it comes to the length of the route that does not paralleling significant existing linear features such as transmission lines, major roads, railroads, minor roads and other utility right-of-way. A significant difference only exists with regard to length not paralleling section lines. However, as MCPO witness Mr. Dauphinais notes in his direct testimony, this better performance of paralleling section lines for Routes ATXI-P-P and ATXI-P-A versus MCPO-P-MZK can only be achieved by

placing a significant number of additional residences both within 150 feet and within 500 feet of the proposed transmission line. (MCPO Ex. 1.7 and Dauphinais, MCPO Ex. 1.0 at 40-41:869-907).

CONCLUSION

For the reasons stated above, MCPO respectfully recommends the adoption of the ATXI-MCPO Stipulated Route in this proceeding.

Respectfully submitted,

MOULTRIE COUNTY PROPERTY OWNERS (MCPO)

Eric Robertson
Ryan Robertson
Andrew Rankin
Lueders, Robertson & Konzen
1939 Delmar Avenue
Granite City, IL 62040
618-876-8500
erobertson@lrklaw.com
ryrobertson@lrklaw.com
drankin@lrklaw.com

77619.1